ABSTRACT OF THE DISCLOSURE

An electron-emitting device includes a substrate, first and second carbon films disposed so as to have a first gap between the first and second carbon films on a surface of the substrate, and first and second electrodes electrically connected with the first and the second carbon films respectively, wherein the carbon film has a region showing orientation, and a direction of the orientation is in an approximately parallel direction along the substrate surface. Thereby, it is possible to improve thermal and chemical stability of a carbon film and stabilize good electron emission characteristics over a long period.